

J. LARSON	DEC. 12, 2012
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REVISED BY: DATE: APPROVED BY:

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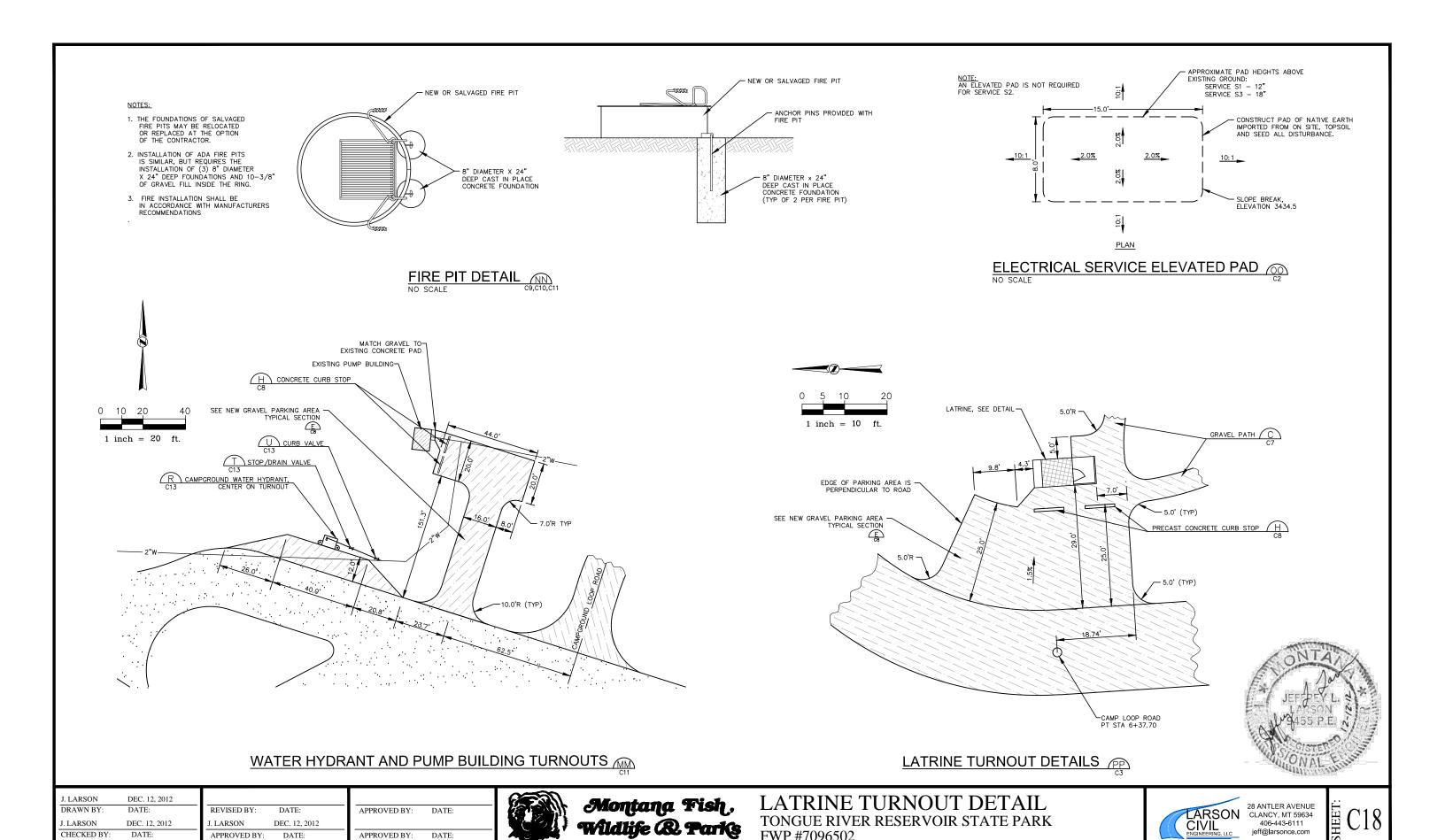
T: DATE:

Montana Fish,
Wildlife & Parks

KIOSK DETAILS TONGUE RIVER RESERVOIR STATE PARK FWP #7096502



28 ANTLER AVENUE CLANCY, MT 59634 406-443-6111 jeff@larsonce.com E C17



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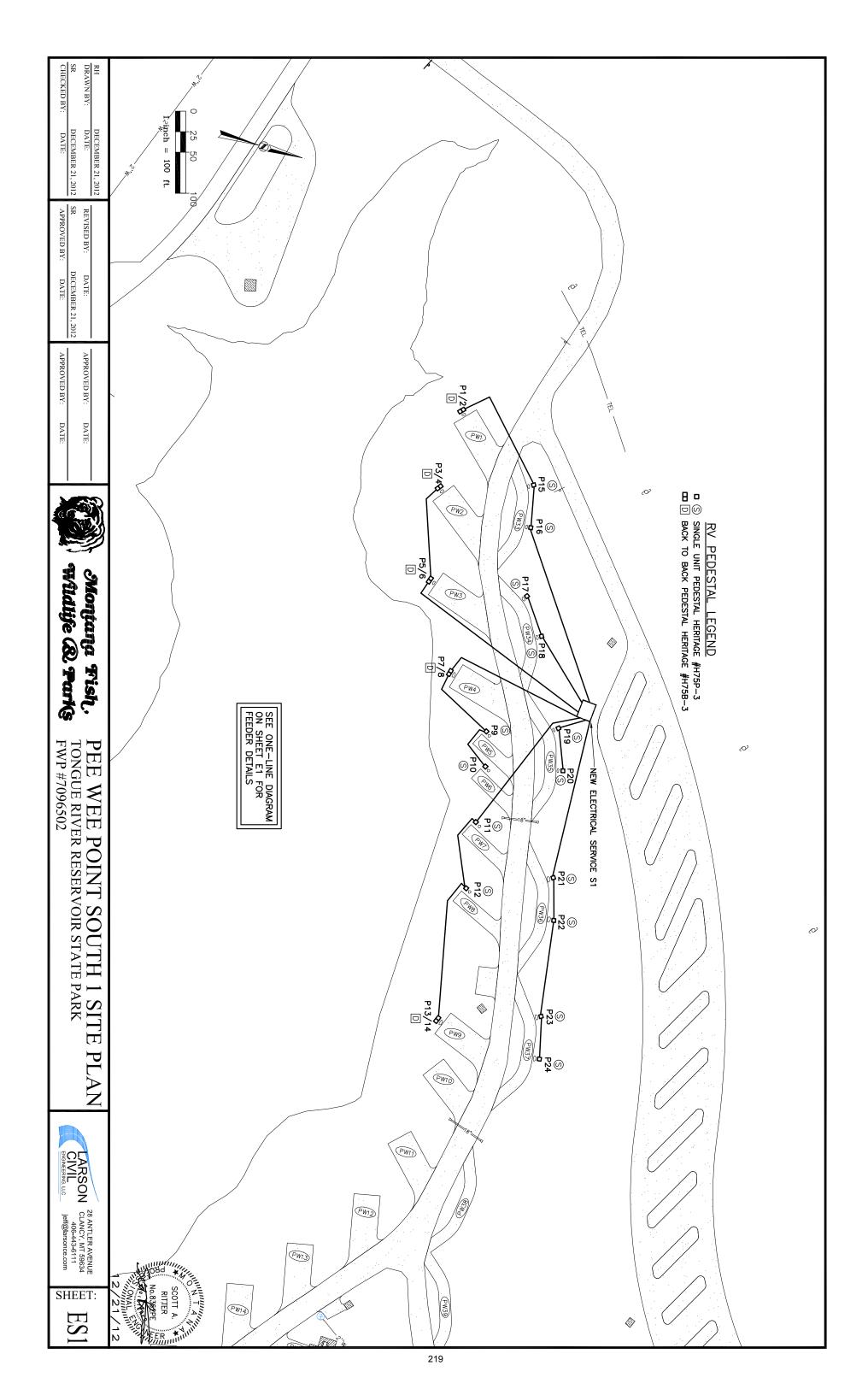
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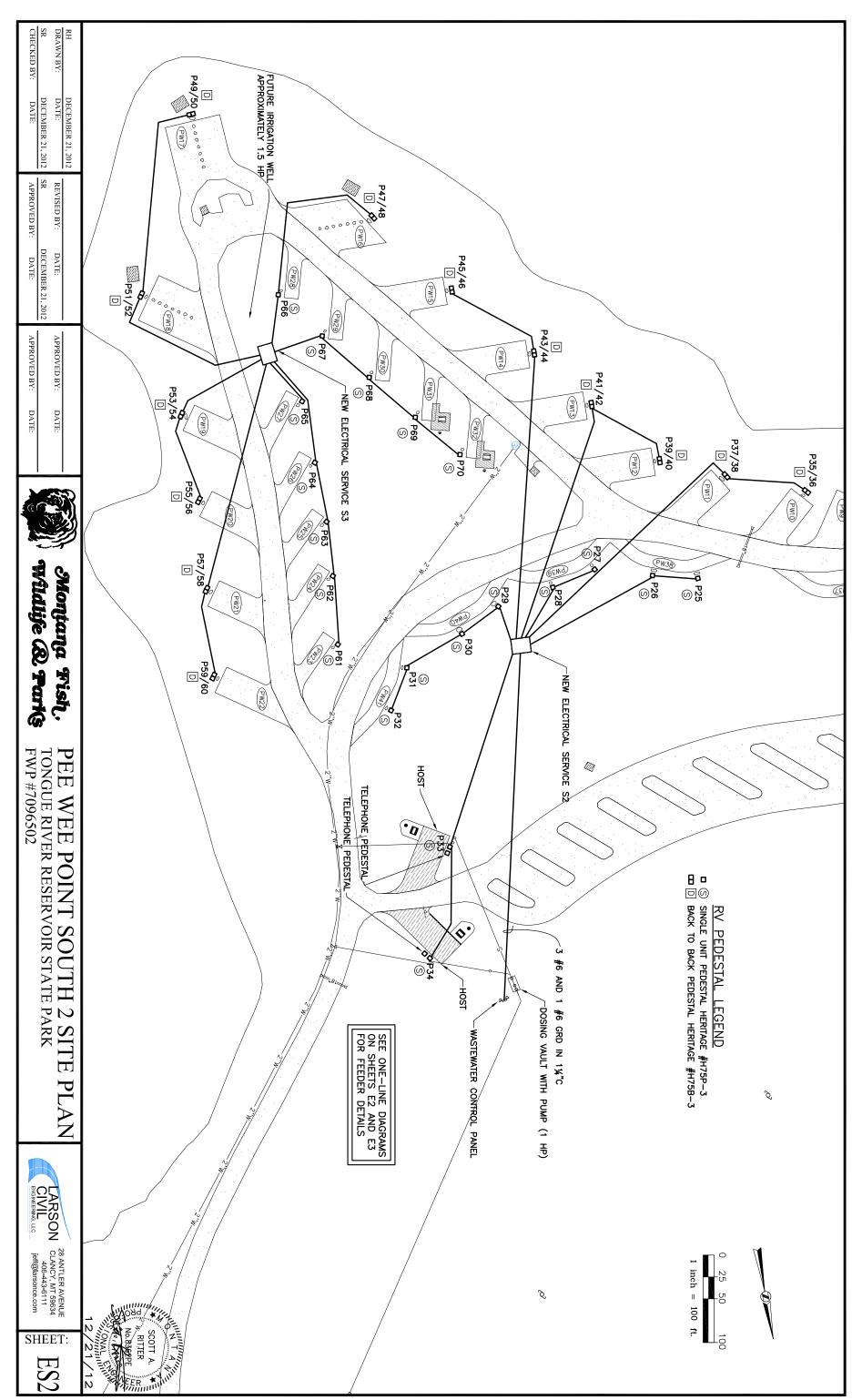
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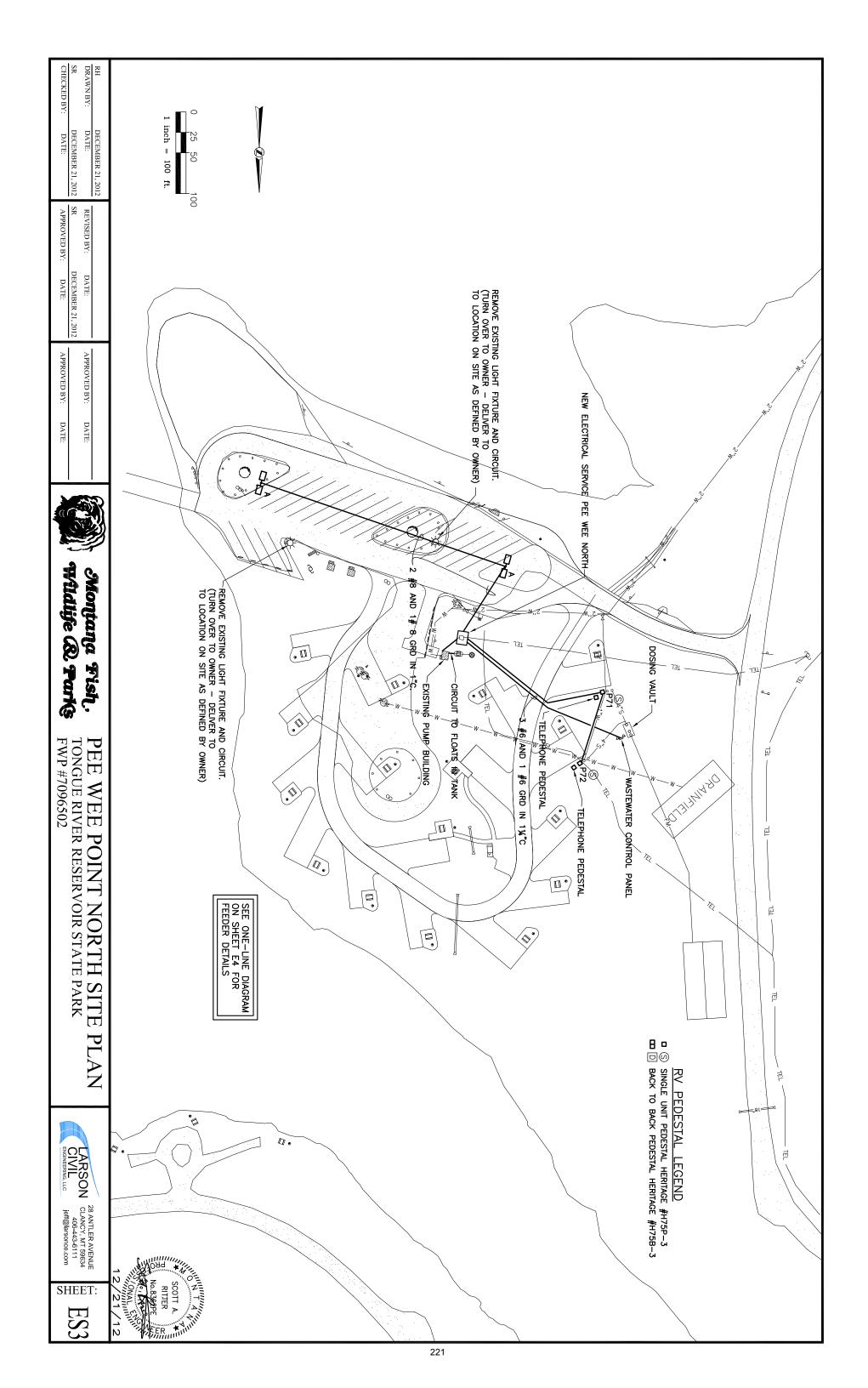
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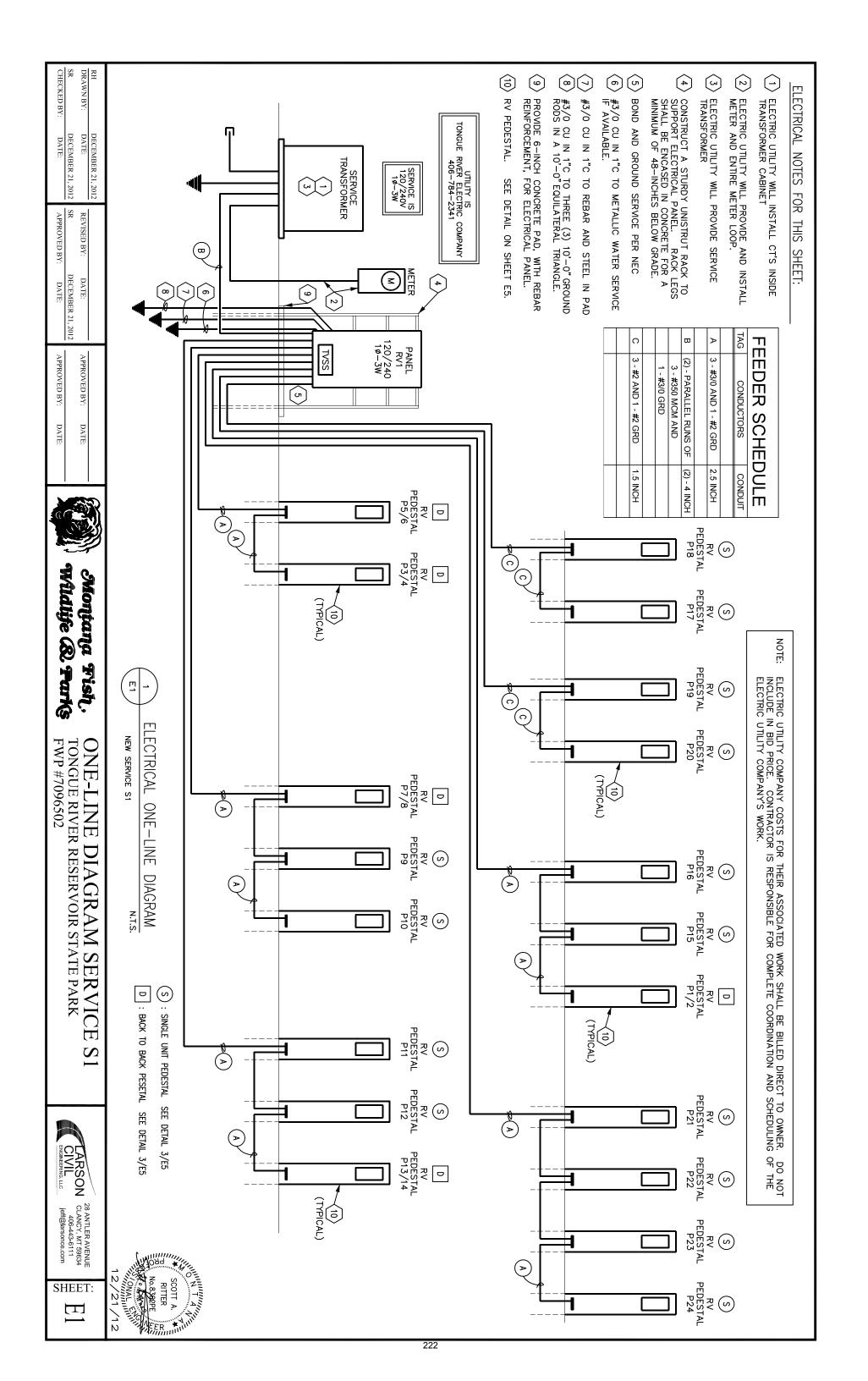
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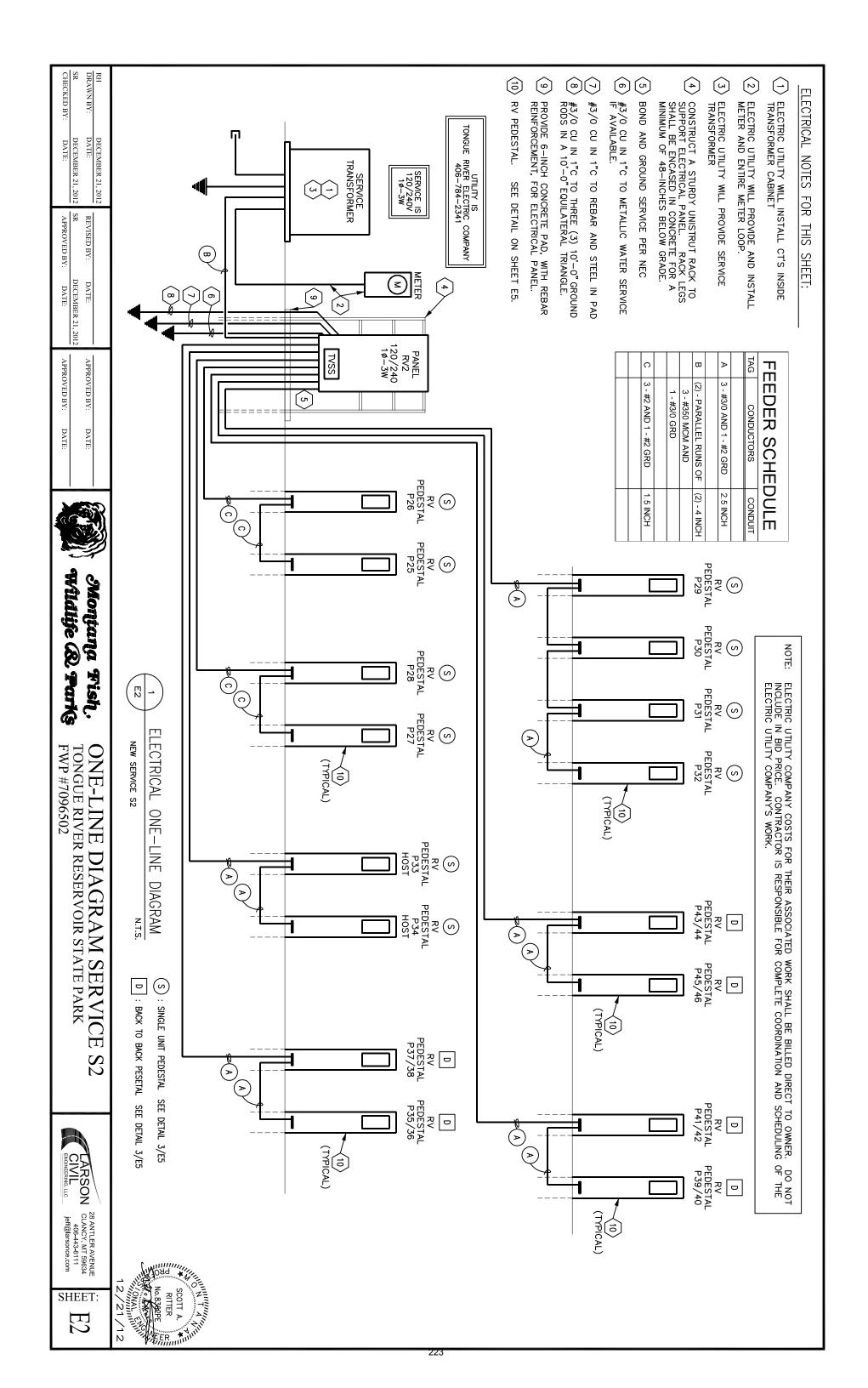
FWP #7096502

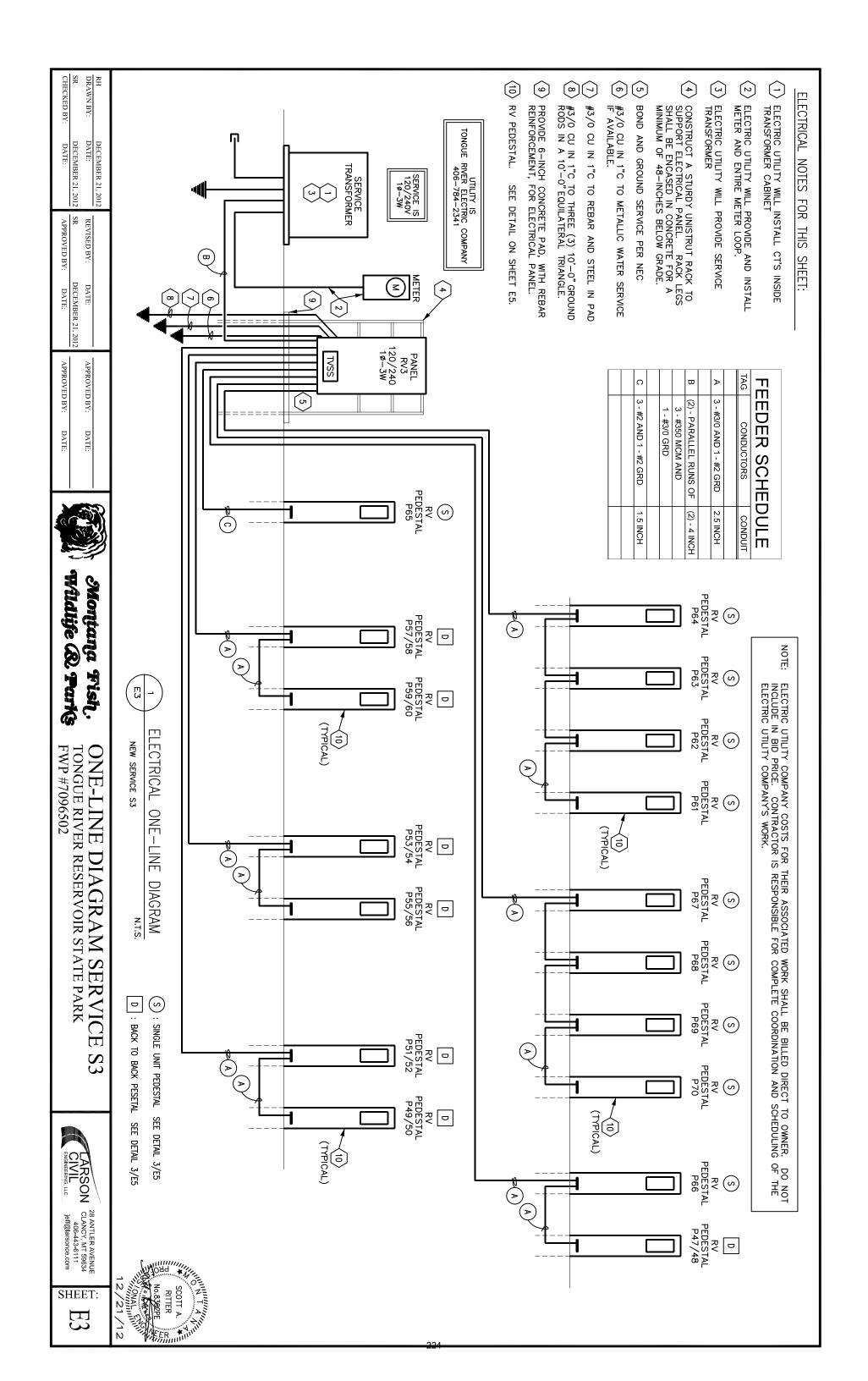












ELECTRICAL NOTES FOR THIS SHEET:

- ELECTRIC UTILITY WILL INSTALL CT'S INSIDE TRANSFORMER CABINET
- \bigcirc ELECTRIC UTILITY WILL PROVIDE AND INSTALL METER AND ENTIRE METER LOOP.
- \bigcirc ELECTRIC UTILITY WILL PROVIDE SERVICE TRANSFORMER
- 4 CONSTRUCT A STURDY UNISTRUT RACK TO SUPPORT ELECTRICAL PANEL. RACK LEGS SHALL BE ENCASED IN CONCRETE FOR A MINIMUM OF 48-INCHES BELOW GRADE.
- (a) (5) BOND AND GROUND SERVICE PER NEC
- #3/0 CU IN 1"C TO METALLIC WATER SERVICE IF AVAILABLE.
- \bigcirc #3/0 CU IN 1"C TO REBAR AND STEEL IN PAD #3/0 CU IN 1"C TO THREE (3) 10'-0" GROUND RODS IN A 10'-0" EQUILATERAL TRIANGLE.
- (9) PROVIDE 6-INCH CONCRETE PAD, WITH REBAR REINFORCEMENT, FOR ELECTRICAL PANEL.
- (3) SEE DETAIL ON SHEET E5.

CONNECT NEW FEEDER TO EXISTING PANEL MDP.

NOTE:

ELECTRIC UTILITY COMPANY COSTS FOR THEIR ASSOCIATED WORK SHALL BE BILLED DIRECT TO OWNER. DO NOT INCLUDE IN BID PRICE. CONTRACTOR IS RESPONSIBLE FOR COMPLETE COORDINATION AND SCHEDULING OF THE ELECTRIC UTILITY COMPANY'S WORK.

- REMOVE EXISTING NEUTRAL TO GROUND BONDING AT EXISTING SERVICE. SERVICE SHALL BE BONDED AT ONLY ONE POINT, AT PANEL PWN.
- 13 REMOVE EXISTING SERVICE LATERAL, EXISTING METER, AND ALL ELECTRICAL UPSTREAM FROM EXISTING PANEL MDP.
- (1) FIVE (5) -2% EMPTY CONDUITS. STUB OUT 10 FEET BEYOND PAD IN THE DIRECTION OF THE CAMPSITES AND CAP BELOW GRADE. STAKE LOCATION OF EACH CONDUIT FOR IDENTIFICATION.
- PHOTOCELL. TORK #2104. 2000 WATTS, 208—277 VAC. CIRCUIT TO DIRECTLY CONTROL SITE LIGHTS.

(15)

SITE LIGHTING CIRCUIT. CIRCUIT DETAILS. SEE SHEET ES3 FOR

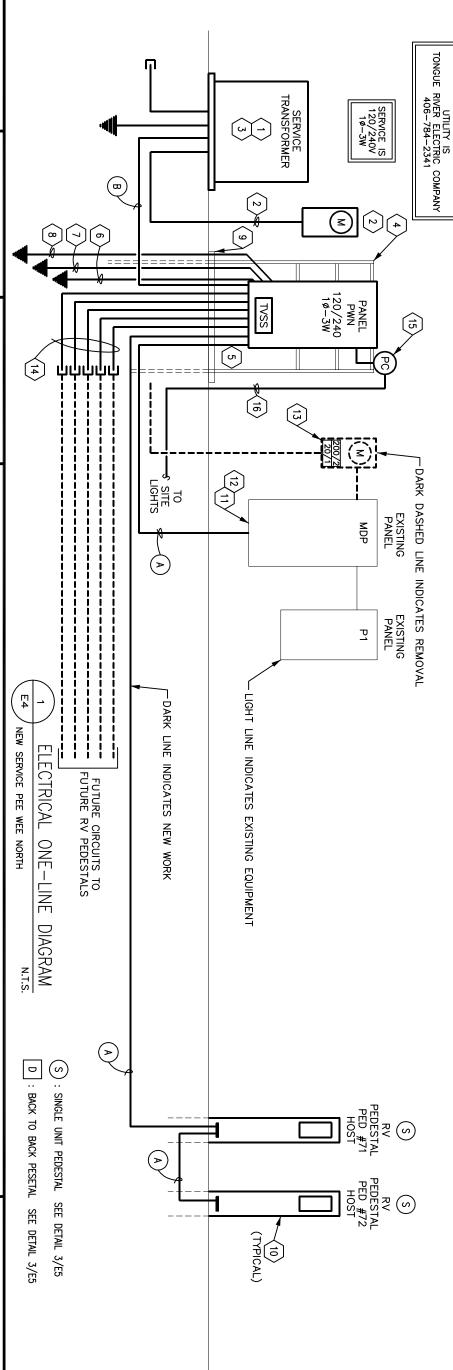
3 - #2 AND 1 - #2 GRD

1.5 INCH

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Α	3 - #3/0 AND 1 - #2 GRD	2.5 INCH
В	(2) - PARALLEL RUNS OF	(2) - 4 INCH
	3 - #350 MCM AND	
	1 - #3/0 GRD	



TONGUE RIVER RESERVOIR STATE PARK ONE-LINE DIAGRAM PEE WE NORTH

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Wildlife & Farks

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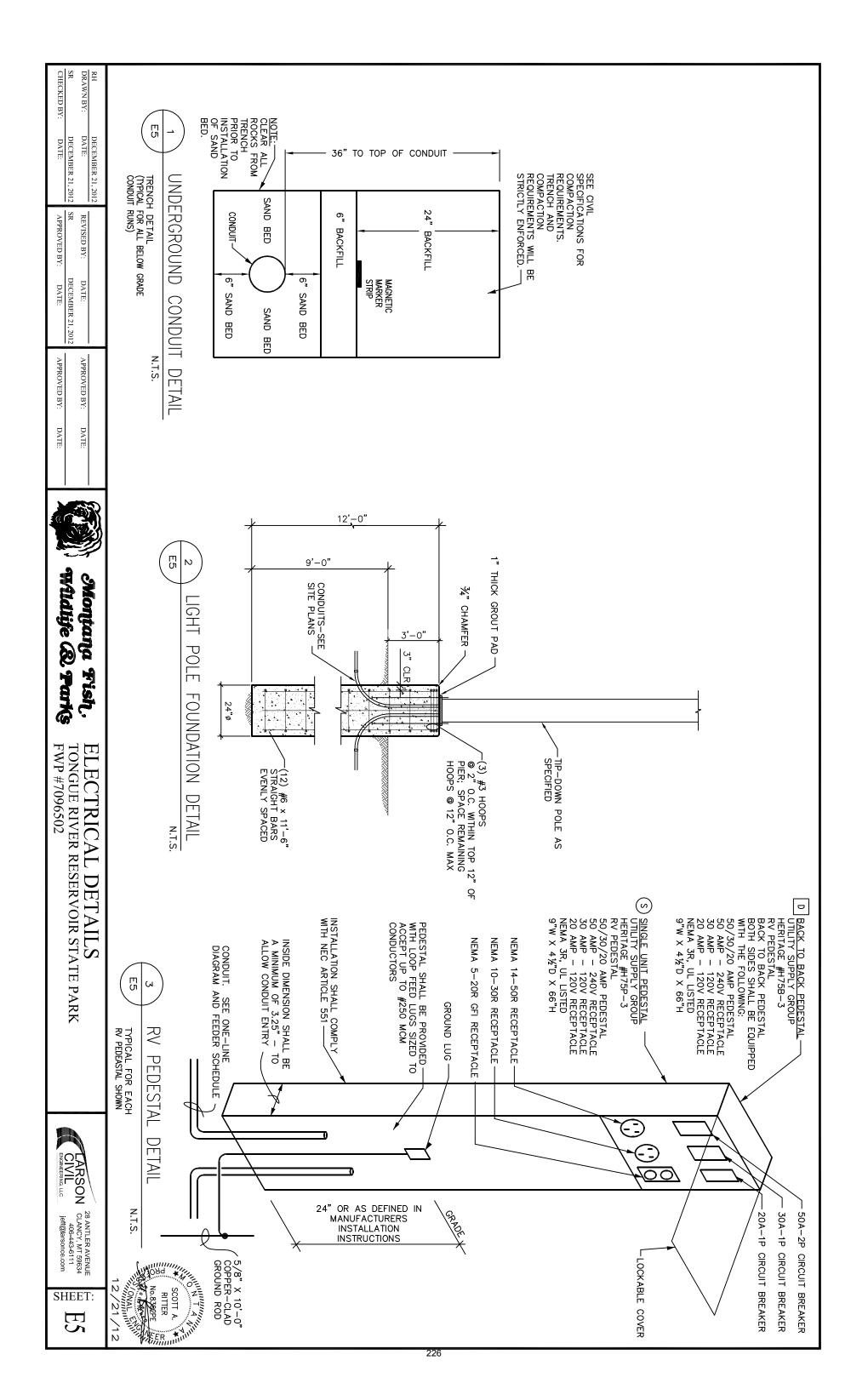
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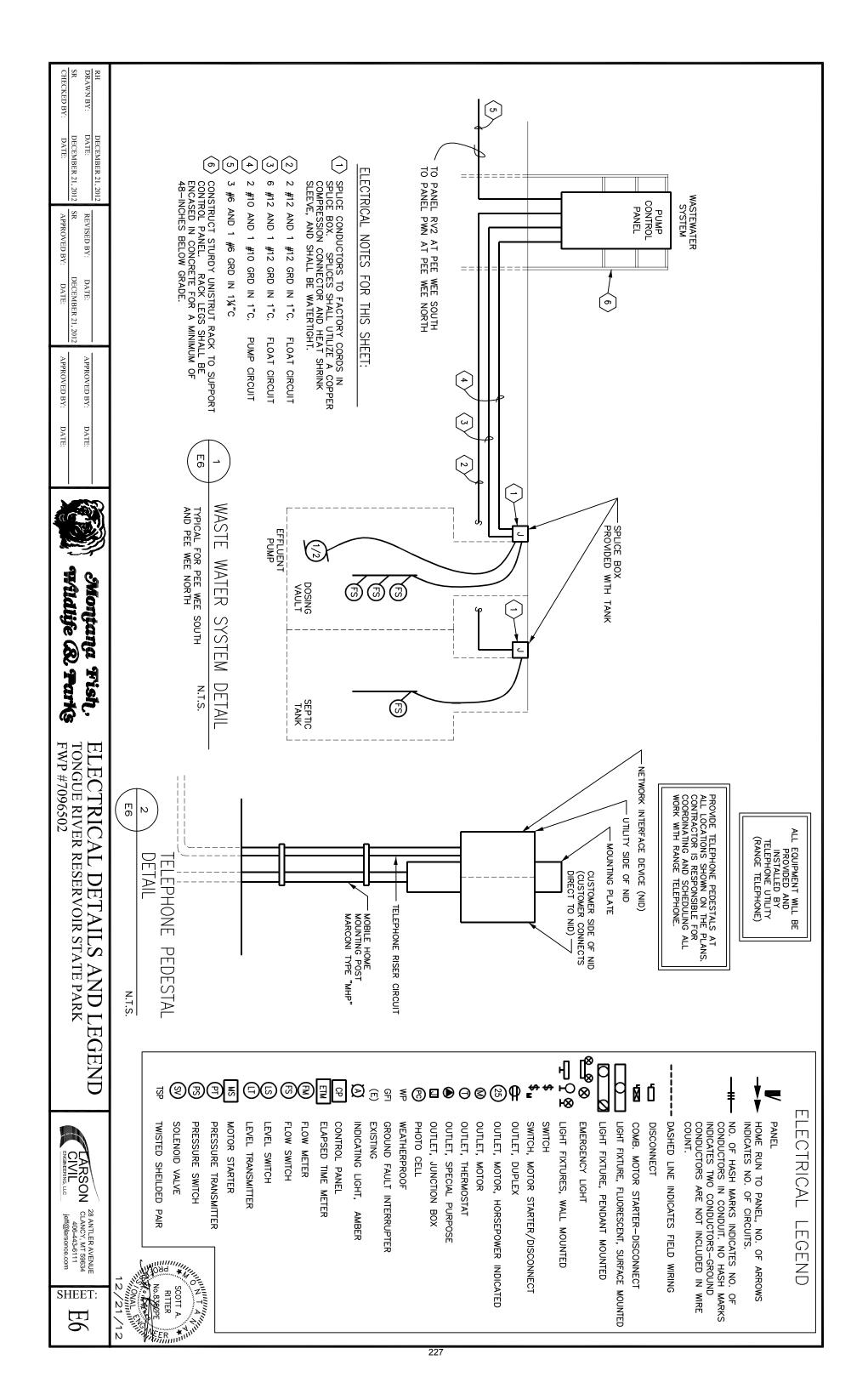
DECEMBER 21, 2012

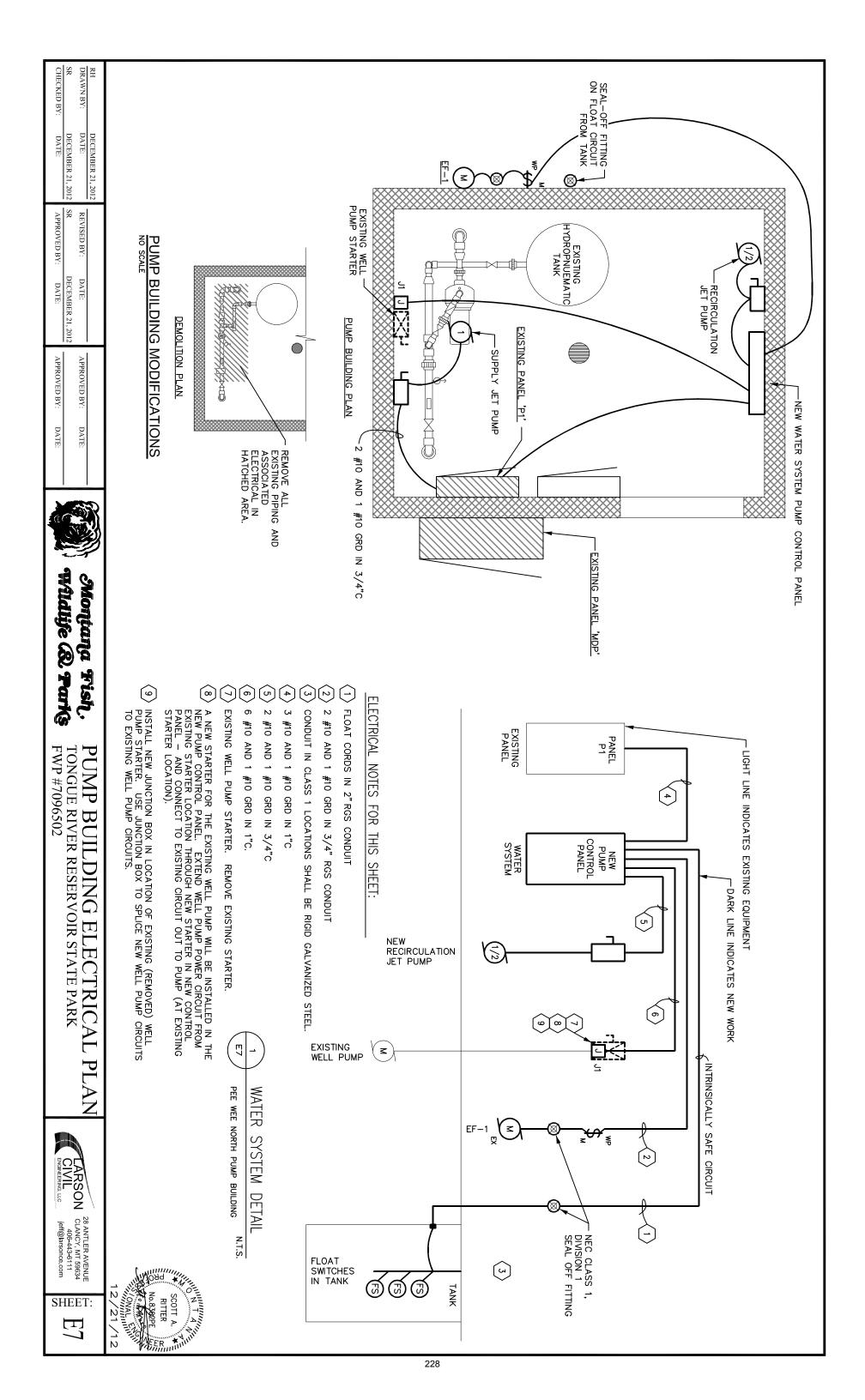


SHEET:

E4







RH I DRAWN BY: I SR I CHECKED BY:		TOTAL CONN. LOAD BREAKER TYPES N = NORMAL S = SHUNT-TRIP G = GFCI	PANEL RV1 LOC. SERVCE 1 NFGR. SQ.D TYPE ILINE AIC 65KAIO - FULL REMARKS PROVIDE CKT BREAKER NO. AMP POLS: 439 CKT BREAKER NO. AMP POLE I 1 1a 20 1 N 15a 20 2 N 15a 20 1 N 15b 20 2 N 17b 20 2 N 17b 20 1 N 17b 20 2 N 17b 20 2 N 17b 20 1 N 17b 20 2 N 17b 20 1 N 17b 20 2 N 17b 20 2 N 17b 20 1 N 17b 20 2 N 17b 2
DECEMBER 21, 2012 DATE: DECEMBER 21, 2012 APP		230400 VA LOAD/PHASE 50% A 50% B	AMPS 600 L-L VOLTS 120 L-N VOLTS 120 PHASE 1 WIRES 3 BREALFRO NILY 240KA TYPE IMA NITER 6 DEMAND FACTOR. LOAD(V L1 19200 19200 19200 19200 19200 19200 19200
REVISED BY: DATE: RR DECEMBER APPROVED BY: DATE:		REC IST TOKVA REC REMAINING REC REMAINING LIGHTING RV PEDESTAL 230.4 K MOTORS MISCELLANEOUS TOTAL DEMAND LOAD DEMAND AMPS	BUS CU MOUNT RACE NEUT FEED 30-10 MANBER 600 WIDTH 36-IN BKRTYPE DEPTH 10-IN MLO. NEMA 3R O 40 AMPS PERS PER L2 REC LTS SHALL IVSS
APPROVED BY: 21, 2012 APPROVED BY:		VA 100% VA 125% VA 43% VA 100% VA 100%	RACKIPAD FEEDER CIRCUIT SE BOTTOM 30-INCHES 30-INCHES 37-VSS: 240KA TYPE IM 10-INCHES 3R Outdoor 3R Outdoor 3R Outdoor 3R Outdoor MITR MISC LOAD DESCRIPTION SPARE
DATE:		000 KVA 000 KVA 000 KVA 9907 KVA 000 KVA 9907 KVA 000 KVA 000 KVA S 9907 KVA G 413 AMPS	
		TOTAL CONN. LOAD BREAKER TYPES N = NORMAL S = SHUNT-TRIP G = GFCI	
Montana Fish. Midife & Fark		232320 VA REC REC LOAD/PHASE 50% A MIS	LAMPS 600 BUS CU L-LVOLTS 120 MAIN BRR 600 PHASE 1 BKR TYPE WIRES 3 MLO EMAND FACTOR. 25-35 PR LOAD(VA) L2 EMAND F960 960 960 960 19200
PANEL SCH TONGUE RIVER FWP #7096502		CONNECTED LOAD DIVERS DEN	MOUNT RACK/PAD FEEDER
IEDULES reservoir state		MANU MANU	PANE PANE PANE PANE PANE PANE PANE PANE
PARK		TOTAL CONN. LOAD 232800 VA BREAKER TYPES LOAD/PHASE N = NORMAL 50% A S = SHUNT-TRIP 50% B G = GFCI	PANEL RV3
LARSON 28 ANTLER AVENUE CLANCY, MT 59834 406-443-6111 jefi@larsonce.com	1 Juliani	REC 1ST 10KVA KVA 100% REC REMAINING KVA 50% LIGHTING KVA 125% RV PEDESTAL 230.4 KVA 125% RV PEDESTAL 230.4 KVA 100% MISCELLANEOUS KVA 100% DEMAND LOAD TOTAL DEMAND LOAD DEMAND AMPS	FEEDER CIRCUIT IVSS: 240KA TYPE WITH REPLA W
SHEET:	SCOTT A AVIIII NO. 8390PE	0.00 KVA 0.00 KVA 0.00 KVA 99.07 KVA 2.40 KVA 2.40 KVA 101.47 KVA 423 AMPS	SEE 1-LINE DIAGRAM MA TVSS (INTERNAL) (CEABLE MODULES S & LED DIAGNOSTICS S & LED DIAGNOSTICS WIRE SIZE WIRE SIZE 13 P64 159 159 159 159 159 159 159 150 150 150 150 150 150 150 150 150 150





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CTOR	40 AMPS PER PED BEFORE APPLICATION OF DEMAND FACTOR	LICATION OF	FORE APP	R PED BE	40 AMPS PE			5	BOLT-ON BREAKERS ONLY	BOLT-ON E	REMARKS:	Š
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					nenne				0															L2	A)		M.L.O.	BKR TYPE	MAIN BKR	NEUT	BUS
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DEMAND AMPS	TOTAL DEMAND LOAD	US	Š			(J	ъ	CONNECTED LOAD																MTR			3R Outdoor				SURFACE
AMPS	LOAD							LOAD																MISC			oor				
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AMPS	0.00 KVA	KVA	KVA	ΚVΑ	0.00 KVA	KVA	0.00 KVA																	WIRE SIZE					OARD		SEE 1-LINE DIAGRAM

	59 AMPS	59		3,	D AMPS	DEMAND AMPS										
2	14.14 KVA	14.14		٥	TOTAL DEMAND LOAD	DEMAN	TOTAL								ξCI	G = GFCI
20	1.50 KVA	1.50	100%	KVA	1.5	S	ANEOL	MISCELLANEOUS	_		Φ	50%	KER	BREA	E = EXISTING BREAKER	ΞE
	KVA	5.76	100%	ΚVΑ	5.8	U)	MOTORS				⊳	50% A		EAKER	N = NEW BREAKER	I Z
	KVA	6.25	125%	ΚVΑ	5.0	-	RES HEAT	ZJ			m	LOAD/PHASE		Sac	BREAKER TYPES	REA
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				LIGHT				1				500	Е	1	20	1a
ıΠ	WIRE SIZE	Ź	LOAD DESCRIPTION	LOAD	MISC	MTR	SHTR	REC LTS	R.	L2		ロ	-	POLE	AMP	NO.
							USE			VA)	LOAD(VA)			KER	BREAKER	S
										TED.	INDICA	TO ADD THE NEW BREAKERS INDICATED.	NE W	DD THE	TOAL	
	QUIRED	RS AS RE	THERE ARE FIVE (5) PROVISIONAL SPACES IN THIS LOADCENTER. REARRANGE THE EXISTING BREAKERS AS REQUIRED	IE EXISTI	NGE TH	EARRA	TER. R	ADCEN	HIS LO	ACES IN T	NAL SF	5) PROVISIO	FVE (E ARE	I I I I I	
		ਨ⊦	REMARKS: PROVIDE NEW CIRCUIT BREAKERS WHERE INDICATED. MATCH EXISTING BREAKER TYPE AND AIC	EAKER	TING BF	HEXIS	MATC	CATED		ERS WHE	BREAK	WCIRCUIT		PROV	RKS:	MAN N
					Ŷ	1 Indoor	NEMA		.O. YES	M.L.O.	ω	WIRES	nter	Gold Loadcenter	Gold	
		R	GOLD LOADCENTER	GOLD			DEPTH	D	PE	BKR TYPE	1	PHASE	~	ERMAF	TYPE POWERMARK	¥
	ERMARK	3 GE POW	THIS IS AN EXISTING GE POWERMARK	SISHT			WIDTH	8	줐	MAIN BKR	120	L-N VOLTS			MFGR. GE	FGF
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IVI	OLL LIFT DECISION	1			C	0012	NO CIVI	4	000	L	222	AMEG			7	TANEL



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Montana Fish.
Widdife & Farks

PANEL SCHEDULES
TONGUE RIVER RESERVOIR STATE PARK
FWP #7096502



SHEET:

12/21/12

					MOTOR SCHEDULE	HE	ב	LE			
EQUIPMENT	~	MOTOR	ਲ		STARTER				딞	DEVICE	AUX CONTROL EQUIP/DEVICES
TAG NUMBER	퓫	모	드	HP PH VLT MFGR	CAT. NO.	SIZE PL OL	尸	户	WS	PILOT	SW PILOT AND ADDITIONAL WORK NOTES
SUPPLY JET PUMP	1	_	240		TIND HTIM						NOTES: 2
RECIRCULATION JET PUMP	1/2	_	240		TIND HTIM						NOTES: 2
EXHAUST FAN EF-1	Fra	_	120								NOTES: 2
EXISTING WELL PUMP	1/2	_	240								NOTES: 2, 3
SEWAGE EFFLUENT PUMP - PEE WEE SOUTH	1	_	240		WITH UNIT						NOTES: 1
SEWAGE EFFLUENT PUMP - PEE WEE NORTH	1/2	_	240		WITH UNIT						NOTES: 1

MOTOR SCHEDULE NOTES

- 1 A CONTROL PANEL IS BEING SUPPLIED WITH THE PUMP. SEE PUMP SPECIFICATIONS FOR
- ADDITIONAL DETAILS. INSTALL AND CIRCUIT CONTROL PANEL AS REQUIRED.
 A CONTROL PANEL IS BEING SUPPLIED WITH THE EQUIPMENT. THE CONTROL PANEL WILL CONTROL THE EXISTING WELL PUMP, THE NEW RECYCLE JET PUMP, AND THE EXHAUST FAN. SEE MECHANICAL SPECIFICATIONS FOR ADDITIONAL DETAILS.
 INSTALL AND CIRCUIT THE CONTROL PANEL AS REQUIRED.
- REMOVE EXISTING WELL PUMP STARTER.

		LIGHT FIXTURE SCHEDULE	EDULE		
TAG	TAG MANUFACTURER	CATALOG NUMBER	LAMP TYPE	MOUNTING	FIXTURE SCHEDULE NOTES
А	LITHONIA - FIXTURES	A LITHONIA - FIXTURES (2): KSF2-250M-R2-MT-SCWA-12"ARM	(2) - 250W MH 2 at 180 I	Degrees	NOTES: 8-13
	LITHONIA - POLE	STSH 25 6-4B (2 at 180 Degrees) FBC DDB			NOTES: 1-5
	LITHONIA - WINCH STSHWCH	STSHWCH			NOTES: 6-7

LIGHT FIXTURE SCHEDULE NOTES

- SQUARE TAPERED STEEL HINGED POLE. HINGED POLE ALLOWS SINGLE PERSON RELAMPING FROM THE GROUND 25 FOOT POLE. 6.41" BASE x 3.63" TOP x 25' TALL. 0.125" WALL THICKNESS. 9.3 EPA AT 100MPH WITH 1.3 GUST FACTOR. 12.5" BOLT CIRCLE. PROVIDE MOUNTING PROVISIONS AS REQUIRED FOR TWO (2) FIXTURES AT 180 DEGREES DARK BRONZE FINISH. ALSO PROVIDE FULL BASE COVER.

- PROVIDE ONE (1) TOTAL WINCH FOR THE PROJECT.
- WINCH SHALL BE REMOVABLE AND SHALL BE INSTALLED ONLY DURING MAINTENANCE MULTI-TAP BALLAST. WIRED AT 240 VOLT ALUMINUM HOUSING. DARK BRONZE FINISH. TWO (2) FIXTURES PER POLE. FULL CUTOFF DISTRIBUTION. 0.125" THICK IMPACT RESISTANT TEMPERED GLASS LENS PULSE START METAL HALIDE LAMP AND BALLAST.
- ROADWAY TYPE II DISTRIBUTION.



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Widife & Farks Montana Fish,

FWP #7096502 TONGUE RIVER RESERVOIR STATE PARK ELECTRICAL SCHEDULES



